

WHAT IS CLAIMED IS:

1. A pen input device comprising:
 - a touch screen panel for receiving a pen input from a user and displaying input data corresponding to the received pen input;
 - 5 an entry field generating portion for generating at least one entry field based on a boundary line of an entry frame drawn by the user;
 - a controller for performing a control operation in such a manner that the input data is displayed spatially inside the generated entry field, and the entry field's size is newly set to be suitable for the input data's size; and
 - 10 a memory unit for storing recognition information related to the entry field and the input data.
2. The pen input device as set forth in claim 1, wherein the entry field generating portion generates the entry field by smoothing the boundary line of the drawn entry frame based on a previously stored entry frame shape.
- 15 3. The pen input device as set forth in claim 1, wherein the entry field includes a virtual cell with a size that is adjusted to be suitable for the size of the input data.
4. The pen input device as set forth in claim 3, wherein, when the input data is handwritten data, the controller detects a beginning point and an end point of strokes of
20 the handwritten data, and, provides information of a finally modified size of the virtual cell obtained when the end point is detected in the entry field generating portion.

5. The pen input device as set forth in claim 4, wherein the entry field generating portion newly sets the entry field's size based on the information of the finally modified size of the virtual cell.

5 6. The pen input device as set forth in claim 4, wherein the controller recognizes the handwritten data of the virtual cell as one stroke group, and converts the recognized handwritten data to computer-recognizable data.

7. The pen input device as set forth in claim 1, wherein, in response to a user's request, the controller sets an inherent attribute of a virtual cell of the entry field.

10 8. The pen input device as set forth in claim 7, wherein the controller duplicates the entry field to generate a page-based database and enables the memory unit to store the page-based database.

9. The pen input device as set forth in claim 7, wherein the inherent attribute defines the entry field to be one of a fixed entry field in which the virtual cell's size and the input data cannot be modified by the user and a reserved entry field in which the
15 virtual cell's size and the input data cannot be modified by the user, and defines a type of the entry data.

10. A pen input method comprising the steps of:

(a) displaying an entry frame drawn by a user through a pen input on a touch
20 screen panel;

(b) detecting a boundary line of the entry frame, setting an entry field based on the detected boundary line, and generating a virtual cell corresponding to the entry field for entering data;

(c) modifying the virtual cell's size in real time in response to entry of data into the virtual cell; and

(d) when the entry of the data into the virtual cell is completed, newly setting the entry field to be suitable for the modified virtual cell's size.

5 11. The pen input method as set forth in claim 10, wherein, in the step (b), the setting of the entry field is performed by smoothing the detected boundary line based on a previously stored entry frame shape.

12. The pen input method as set forth in claim 10, wherein, when the data entered into the virtual cell is handwritten data, the step (c) comprises the steps of:

10 (c1) detecting a beginning point and an end point of the handwritten data;

(c2) modifying the virtual cell's size while displaying a trace of the handwritten data; and

(c3) storing information on the modified virtual cell's size during a period until the end point is detected.

15 13. The pen input method as set forth in claim 10, further comprising the step of:

(e) in response to a user's request, setting an inherent attribute of the virtual cell of the entry field.

20 14. The pen input method as set forth in claim 13, wherein the inherent attribute defines the entry field to be one of a fixed entry field in which the virtual cell's size and the entered data cannot be modified by the user, and a reserved entry field in which the virtual cell's size, and the entered data cannot be modified by the user, and defines a type of the entry data.

15. The pen input method as set forth in claim 10, further comprising the steps of:

(f) in response to a user's request, duplicating the entry field to generate a page-based database; and

5 (g) storing the generated page-based database in a memory.

16. The pen input method as set forth in claim 10, further comprising the step of:

(h) recognizing handwritten data entered into the virtual cell as one stroke group, and converting the recognized handwritten data to computer-recognizable data.

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